

REMARKS

In the instant amendment, Claims 49, 53, 54, 100, 102-107, 110-111, 114, 116-119 and 123 have been canceled without prejudice as explained below. Claims 55, 61, 112 and 115 have been amended. Upon entry of the instant amendment, Claims 55, 59-64, 112 and 115 will be pending and under consideration.

I. AMENDMENTS TO THE CLAIMS

Claims 49, 53, 54, 100, 102-107, 110-111, 114, 116-119 and 123 have been canceled without prejudice to Applicants' right to pursue canceled subject matter in one or more related applications.

Claims 55, 61 and 112 have been amended without prejudice to Applicants' right to pursue deleted subject matter in one or more related applications.

Claims 112 and 115 have been amended to recite "polynucleotide" in keeping with the antecedent provided in their base claims. Claim 115 has also been amended to capitalize "Claim" to be consistent in form with the other dependent claims.

Applicants respectfully submit that the amendments to the claims comply with the requirement of 37 C.F.R. § 1.116 and present the claims in better form for consideration. Since the amendments to claims are fully supported by the specification and claims as originally filed, entry thereof is respectfully requested. No new matter has been added.

No amendment fee is believed to be due.

II. WITHDRAWAL OF THE REJECTION OVER PEASE *ET AL.*

Applicants acknowledge that the rejections of Claim 49 under 35 U.S.C. § 102(b) and of Claims 53-54, 199, 103, 104, 110-112, 114, 116-119 and 123 under 35 U.S.C. § 103(a) have been withdrawn. With respect to the Patent Office's comments regarding Applicants' arguments relating to Pease *et al.*, Applicants reiterate that the isolated polynucleotides recited in the claims encompass allelic variants that include at least one SNP at particularly recited positions of SEQ ID NO:1 wherein such SNPs are found in a general human population with about 25% or less frequency.

III. WITHDRAWAL OF THE REJECTION OF CLAIMS 100, 102 AND 123

Applicants acknowledge the withdrawal of the rejection of Claims 100, 102 and 123 under 35 U.S.C. § 103(a).

IV. CLAIM REJECTION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH FOR ALLEGED NEW MATTER

Claims 100, 102-107, 110-112, 114-119 and 123 stand rejected under 35 U.S.C. § 112, first paragraph, for an alleged lack of written description. Specifically, the Patent Office contends that the element “wherein the oligonucleotide selectively hybridizes to the target sequence under conditions in which the oligonucleotide does not hybridize to SEQ ID NO:1 or a complement thereof” constitutes new matter. Applicants respectfully do not acquiesce to the propriety of the rejection, nonetheless, to expedite prosecution, the subject matter to which the Patent Office refers has been canceled in the instant amendment. Applicants respectfully request the withdrawal of the rejection of Claims 100, 102-107, 110-112, 114-119 and 123 under 35 U.S.C. § 112, first paragraph.

V. REJECTION OF CLAIMS 100, 102-107, 110-112, 114-119 AND 123 UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

Claims 100, 102-107, 110-112, 114-119 and 123 stand rejected under 35 U.S.C. § 112, first paragraph, for alleged lack of written description in that, according to the Patent Office, the relevant identifying characteristics of a representative number of species within the claimed genus have not been adequately disclosed. The rejection is moot with respect to Claims 100, 102-107, 110, 111, 114, 116-119 and 123 that have been canceled, without prejudice to Applicants’ right to pursue the cancel in one or more related applications. Moreover, the amendments to Claims 112 and 115 have obviated the rejection with respect to these claims. Applicants respectfully that the rejection of Claims 100, 102-107, 110-112, 114-119 and 123 under 35 U.S.C. § 112, first paragraph, be withdrawn.

VI. REJECTION OF CLAIMS UNDER 35 U.S.C. § 112, FIRST PARAGRAPH, FOR ALLEGED NON-ENABLEMENT

Claims 49, 53-55, 59-68, 100, 102-107, 110-112, 114-119 and 123 stand rejected under 35 U.S.C. § 112, first paragraph, for alleged lack of enablement. Applicants respectfully disagree with the propriety of the rejection for reasons of record in Applicants previous communications to the Patent Office including the Amendment and Response of June 23, 2004, and the Amendment and Response of October 24, 2001, for example. Nonetheless, the rejection is moot with respect to Claims 49, 53, 54, 100, 102-107, 110-111, 114, 116-119 and 123 that have been canceled without prejudice in the instant amendments to the claims.

Moreover, the Patent Office acknowledges that the specification is “enabling for isolated polynucleotides of 10 nucleotides in length and isolated polynucleotides of at least 18 consecutive bases which span SNP 35983 and 61465.” *See* pages 5-6 of the September 17th Office Action. Claims 55 and 61 have been amended to recite isolated polynucleotides of at least 18 consecutive bases (Claim 55) or of at least 100 consecutive bases (Claim 61) that include at least one SNP selected from a group consisting of SNPs at positions 61465 and 35983. Therefore, Applicants respectfully submit that amended Claims 55 and 61, and amended Claims 59, 60, 62-64, 112 and 115 that depend from Claims 55 and 61, are fully enabled.

Accordingly, Applicants respectfully request the withdrawal of the rejection of Claims 49, 53-55, 59-68, 100, 102-107, 110-112, 114-119 and 123 under 35 U.S.C. § 112, first paragraph.

VII. CLAIM REJECTIONS UNDER 35 U.S.C. § 102(b)

Claims 49 and 123 stand rejected under 35 U.S.C. § 102(b) as being anticipated allegedly by Brennan (U.S. Patent No. 5,474,796). Claims 100, 103-106 and 123 stand rejected under 35 U.S.C. § 102(b) as being anticipated allegedly by Kreitman *et al.* (EP 0615976A1).

A. Rejection of Claims 49 and 123

Claims 49 and 123 stand rejected under 35 U.S.C. § 102(b) as being anticipated allegedly by Brennan (U.S. Patent No. 5,474,796). The Patent Office alleges that Brennan teaches every possible 10-mer nucleic acid. Actually, Brennan only teaches one 10-mer nucleic acid and that it may be theoretically possible to synthesize every possible 10-mer nucleic, which would require a couple of plates as described by Brennan. For instance, the apparatus described in Brennan at column 9, lines 10-12, only produces 10-mer array plates at the rate of 1 plate or 10⁶ oligonucleotides per hour, which requires that at least two plates are necessary to hold every possible 10-mer nucleic acid and nowhere does Brennan use any but prophetic language in describing such 10-mer plates (unlike 3-mer plates which Brennan describes in Example 4 and in Figure 1). Nonetheless, the rejection is moot in view of the cancellation of Claims 49 and 123. Accordingly, Applicants respectfully request that the rejection of Claims 49 and 123 under 35 U.S.C. § 102(b) be withdrawn.

B. Rejection of Claims 100, 103-106 and 123

Claims 100, 103-106 and 123 stand rejected under 35 U.S.C. § 102(b) as being anticipated allegedly by Kreitman *et al.* (EP 0615976A1). The rejection is moot in view of the cancellation of Claims 100, 103-106 and 123. Applicants respectfully request that the rejection of Claims 100, 103-106 and 123 under 35 U.S.C. § 102(b) be withdrawn.

VIII. CLAIM REJECTION UNDER 35 U.S.C. § 103(a)

Claims 53-54, 100, 103-104, 110-112, 114 and 116-119 stand rejected under 35 U.S.C. § 103(a) as being unpatentable allegedly over Brennan (U.S. Patent No. 5,474,796) in view of Ahern (1995) *The Scientist* 9:20. The rejection is moot with regard to Claims 53, 54, 100, 103-104, 110-111, 114 and 116-119 that have been canceled in the instant amendment. Applicants respectfully submit that the rejection is obviated in view of the amendment to Claim 112 to depend from Claims 55 and 61 that are not included in the rejection. Accordingly, Applicants respectfully request that the rejection of Claims 53-54, 100, 103-104, 110-112, 114 and 116-119 under 35 U.S.C. § 103(a) be withdrawn.

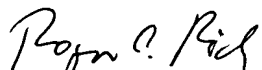
CONCLUSION

In light of the above amendments and remarks, Applicants respectfully request that the Patent Office reconsider this application with a view towards allowance.

No fees, other than those for the Notice of Appeal and for the Petition to Withdraw the Terminal Disclaimer, are believed to be due with this Amendment and Response. However, the Commissioner is hereby authorized to charge any required fee(s), any necessary fee under 37 C.F.R. § 1.17, or credit any overpayment to Jones Day Deposit Account No. 503013 (order no. 043018-999057).

Respectfully submitted,

Date: December 17, 2004



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B. Rejection of Claims 100, 103-106 and 123

Claims 100, 103-106 and 123 stand rejected under 35 U.S.C. § 102(b) as being anticipated allegedly by Kreitman *et al.* (EP 0615976A1). The rejection is moot in view of the cancellation of Claims 100, 103-106 and 123. Applicants respectfully request that the rejection of Claims 100, 103-106 and 123 under 35 U.S.C. § 102(b) be withdrawn.

VIII. CLAIM REJECTION UNDER 35 U.S.C. § 103(a)

Claims 53-54, 100, 103-104, 110-112, 114 and 116-119 stand rejected under 35 U.S.C. § 103(a) as being unpatentable allegedly over Brennan (U.S. Patent No. 5,474,796) in view of Ahern (1995) *The Scientist* 9:20. The rejection is moot with regard to Claims 53, 54, 100, 103-104, 110-111, 114 and 116-119 that have been canceled in the instant amendment. Applicants respectfully submit that the rejection is obviated in view of the amendment to Claim 112 to depend from Claims 55 and 61 that are not included in the rejection. Accordingly, Applicants respectfully request that the rejection of Claims 53-54, 100, 103-104, 110-112, 114 and 116-119 under 35 U.S.C. § 103(a) be withdrawn.

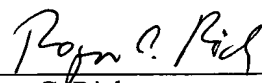
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